



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/577,476	05/24/2000	Raymond V. Damadian	DAMADIAN 3.0-076	4571

530 7590 02/04/2003

LERNER, DAVID, LITTENBERG,  
KRUMHOLZ & MENTLIK  
600 SOUTH AVENUE WEST  
WESTFIELD, NJ 07090

EXAMINER

BOSWELL, ALAN M

ART UNIT

PAPER NUMBER

3729

DATE MAILED: 02/04/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/577,476

Applicant(s)

DAMADIAN, RAYMOND V. *OH*

Examiner

Alan M Boswell

Art Unit

3729

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 August 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 7-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 7-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                  | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>4</u> . | 6) <input type="checkbox"/> Other:  |

**DETAILED ACTION**

***Response to Amendment***

1. The applicant's amendment filed 8/12/02 has been fully considered and made of record.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 7,13,19 and 20-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 3849878 to Rudd in view of US Patent No. 4736513 to Barbier.

Rudd discloses an intermediate element 26 including a plurality of elongated magnetic rods 12 extending side-by side in a lengthwise direction with a dielectric material 18 therebetween; and slicing the intermediate element 26 including a plurality of shim pieces 28 each having a thickness direction corresponding to the length direction of the rods in the intermediate element 26 (see Figs 3-7).

Rudd fails to teach ferromagnetic rods between the dielectric.

Barbier teaches using ferromagnetic rods around the molding (see col. 4, lines 4-51) for the purpose of eliminating the defects of the appearance, swelling and craters.

It would have been obvious to one of ordinary skill in the art at the time of invention was made to using ferromagnetic rods between the dielectric in light of the teaching of Barbier for the purpose of eliminating the defects of the appearance, swelling and craters.

Regarding claim 13, Rudd teaches the step of slicing the intermediate element 26 includes cutting through the element with a saw (see col. 1, line 20).

Regarding claim 19, Rudd teaches the step of providing an intermediate element 26 includes covering the rod with a dielectric sleeve (see col. 2, lines 15 –34)

Regarding claim 20, Rudd teaches step of providing an intermediate element 26 placing the rods in a mold and curing the dielectric 18 around the rods 12 in the mold (see col. 2, lines 35-47).

Regarding claim 21, Rudd teaches a dielectric, which includes an epoxy (see col. 2, lines 15–34).

Regarding claim 22, Rudd teaches the dielectric is placed between a dielectric sleeve 14 and the rod 12 (see col. 2, lines 15 –34).

Regarding claim 23, Rudd and Barbier fail to teach the dielectric sleeve 14 is a fiberglass.

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to use a fiberglass sleeve because Applicant has not disclosed that using fiberglass sleeve on the rods provides an advantage, is used for a particular purpose, or solved a stated problem. One of ordinary skill in the art, furthermore, would have expected Applicant's invention to perform equally well with either polyamide resin

Art Unit: 3729

taught by Rudd or by the claimed fiberglass because both perform the same function of insulating the rods.

Therefore, it would have been obvious to one of ordinary skill in the art to modify Rudd to obtain the invention as specified in claim 23.

Regarding claim 24, Rudd teaches the rods are substantially circular in cross-sectional shape.

Rudd and Barbier fail to teach the rods are substantially hexagonal in cross-sectional shape.

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to use rods that are substantially hexagonal in cross-sectional shape because Applicant has not disclosed that using rods that are substantially hexagonal in cross-sectional shape provide an advantage, is used for a particular purpose, or solved a stated problem. One of ordinary skill in the art, furthermore, would have expected Applicant's invention to perform equally well with either the shape taught by Rudd or by the claimed hexagonal shape because both perform the same function.

Therefore, It would have been obvious to one of ordinary skill in the art to modify Barbier and Rudd to obtain the invention as specified in claim 24.

5. Claims 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rudd in view Barbier further in view of US Patent No. 5,446,434 to Dorri.

Rudd and Barbier fail to teach the step of assembling a plurality of the shim pieces with a magnet pole to form a shim on the pole.

Dorri teaches he step of assembling a plurality of the shim pieces with a

Art Unit: 3729

magnet pole to form a shim on the pole (see col. 2, lines 29-36) to provide finer tuning of the shim coverage for a smoother magnetic field to better reduce three-dimensional magnetic field inhomogeneity.

It would have been obvious to one of ordinary skill in the art at the time of invention was made to assemble a plurality of shims pieces with a magnet pole to form a shim on the pole in light of the teaching of Dorri in order to provide finer tuning of the shim coverage for a smoother magnetic field to better reduce three-dimensional magnetic field inhomogeneity.

Regarding claim 9, Dorri teaches the assembling step is performed so as to form a shim in the form of a substantially closed shim ring (see col. 4, lines 60-67)

Regarding claim 10, Dorri teaches the shim pieces are assembled with gaps between the shim pieces forming the substantially closed shim ring (see col. 5 line 68 and col. 6, lines 1-4).

6. Claims 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rudd and Barbier in view of Dorri further in view US Patent No. 6,150,819 to Laskaris.

Rudd teaches an intermediate element that has a generally arcuate shape in the transverse to the longitudinal direction of the rods;

Rudd and Barbier fail to teach the shim pieces are generally arcuate.

Laskaris teaches shim pieces, which are generally arcuate (see col. 5, lines 47-48) for the purpose of assembling the circular base and shim ring.

It would have been obvious to one of ordinary skill in the art at the time of invention for the shims pieces have an arcuate in light of the teaching of Laskaris for the purpose of assembling the circular base and shim ring.

Regarding claim 12, Laskaris teaches the shim pieces all have substantially equal thickness (see col. 6 lines 3-4).

7. Claims 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rudd in view of Barbier further in view Laskaris.

Rudd and Barbier teach an intermediate element that has a generally arcuate shape in the transverse to the longitudinal direction of the rods;

Rudd and Barbier fail to teach the shim pieces are generally arcuate.

Laskaris teaches shim pieces, which are generally arcuate (see col. 5, lines 47-48) for the purpose of assembling the circular base and shim ring.

It would have been obvious to one of ordinary skill in the art at the time of invention for the shims pieces have an arcuate in light of the teaching of Laskaris for the purpose of assembling the circular base and shim ring.

Regarding claim 14, Laskaris teaches the step of trimming the shim pieces to alter the profile of the shim pieces in a plane transverse to the thickness of the shim pieces after the slicing step to forming a general arcuate form.

Regarding claim 15 and 16, Rudd and Barbier fail to teach trimming step includes cutting through the shim pieces with an abrasive jet.

Laskaris teaches a trimming step includes cutting through the shim pieces with a water jet (see col. 5, lines 43).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to use a water jet to trim the shim pieces because Applicant has not disclosed that using an abrasive jet saw or milling machine provides an advantage, is used for a particular purpose, or solved a stated problem. One of ordinary skill in the art, furthermore, would have expected Applicant's invention to perform equally well with water jet taught by Laskaris or by the claimed abrasive jet or milling machine because both perform the same function of trimming the shim pieces.

Therefore, it would have been obvious to one of ordinary skill in the art to modify Rudd in view of Laskaris to obtain the invention as specified in claims 15 and 16.

8. The recitation method of making pieces for magnetic resonance imaging magnet has not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

### ***Response to Arguments***

9. Applicant's arguments with respect to claims 7-24 have been considered but are moot in view of the new ground(s) of rejection.



Telephone inquiries regarding the status of applications or other general questions, by persons entitled to the information, should be directed to the group clerical personnel. In as much as the official records and applications are located in the clerical section of the examining groups, the clerical personnel can readily provide status information. M.P.E.P. 203.08. The Group clerical receptionist number is (703) 308-1148.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alan M Boswell whose telephone number is (703) 305-0308. The examiner can normally be reached on M-F (7:30-4:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter D. Vo can be reached on (703) 308-1789. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-3579 for regular communications and (703) 305-3579 for After Final communications.

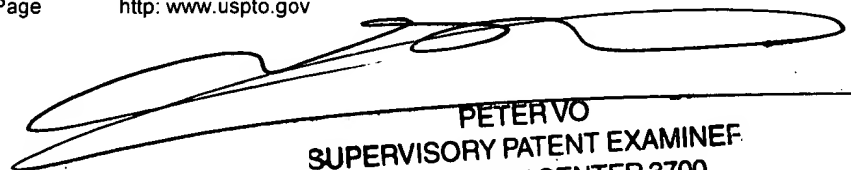
Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-2572.

Other helpful telephone numbers are listed for applicant's benefit.

Allowed Files & Publication	(703) 308-6789 or (888) 786-0101
Assignment Branch	(703) 308-9723
Certificates of Correction	(703) 305-8309
Drawing Corrections/Draftsman	(703) 305-8404/8335
Petitions/Special Programs	(703) 305-9285
Terminal Disclaimers	(703) 305-8408
PCT Help Desk	(703) 305-3257

If the information desired is not provided above, or a number has been changed, please call the general information help line below.

Information Help line	1-800-786-9199
Internet PTO-Home Page	<a href="http://www.uspto.gov">http://www.uspto.gov</a>



PETER VO  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 3700

Application/Control Number: 09/577,476

Page 9

Art Unit: 3729

ab

January 24, 2003